

What Is Claimed Is:

1. A locating device, in particular a hand-held locating device (10), for detecting objects enclosed in a medium, comprising a housing (12) and at least one sensor system positioned in the housing (12), as well as an opening (24) penetrating the device (10), wherein the opening (24) in the measuring device (10) can be illuminated by at least one light source (34) provided in the measuring device.
2. The locating device as recited in Claim 1, wherein the sensor system has at least one inductive sensor for locating purposes.
3. The locating device as recited in Claim 2, wherein the opening (24) is oriented concentrically in relation to a coil (40) of the inductive sensor positioned in the measuring device.
4. The locating device as recited in Claim 1 or 2, wherein the sensor system has at least one capacitive sensor.
5. The locating device as recited in Claim 1, wherein the opening (24) is formed by a sleeve (26), it being possible to illuminate the sleeve (26), using at least one light source (34, 36) provided in the measuring device.
6. The locating device as recited in Claim 5, wherein the sleeve (26) is essentially made of an at least partially transparent plastic.

7. The locating device as recited in Claim 5 or 6,  
wherein the sleeve is designed to scatter light diffusively.
8. The locating device as recited in one of the preceding  
claims,  
wherein a color-coded light signal is provided to  
illuminate the opening (24) in the measuring device (10).
9. The locating device as recited in Claim 8,  
wherein the opening (24) is illuminable in at least two  
different colors.
10. The locating device as recited in one of the preceding  
claims,  
wherein the opening (24) is variably illuminated as a  
function of a measuring signal of at least one sensor.
11. The locating device as recited in one of the preceding  
claims,  
wherein a plurality of light sources (34, 36) are  
provided for illuminating the opening (24) in the  
measuring device (10).
12. The locating device as recited in one of the preceding  
claims,  
wherein the at least one light source (34) is a light-  
emitting diode (LED) (36).
13. The locating device as recited in Claim 1,  
wherein sealing means are provided which allow the opening  
(24) penetrating the device (10) to be sealed as a function  
of a measuring signal of at least one sensor.